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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,435

07/18/2003

Keith Kang

4024-4028US1

4698

7590

08/02/2004

MORGAN & FINNEGAN, L.L.P.  
345 Park Avenue  
New York, NY 10154-0053

EXAMINER

NASRI, JAVAID H

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/623,435	<b>Applicant(s)</b> KANG ET AL.	
	<b>Examiner</b> Javaid Nasri	<b>Art Unit</b> 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 113-132 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 113-132 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/18/03, 11/8/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/18/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because:
  - a) Figures 3, 4, 6 and 7 are not legible. They look like a blob of ink. Please try to send better copies.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figures 9 and 13-20 should be designated by a legend such as --Prior Art-- because (see **note below**) only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

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1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

**Note: In the description of drawings these figures are described as examples and not mentioned of present invention.**

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the

a) non-circular per claim 129,

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

4. Claims 114-116, 124 are objected to because of the following informalities:
- a) In claims 114-116, line 2, it is not clear “minimum thickness” of what?
  - b) In claims 114-116, line 2, “**the** minimum thickness” lacks antecedent bases.
  - c) In claims 115-116, a period (.) is missing at the end.
  - d) In claim 124, provide unit of the pitch dimension.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 113-117, 120, 123, 125-127 and 129-132 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al (5,815,621, cited in IDS) in view of Omiya et al (6,158,900, cited in IDS).

Sakai et al discloses (**for claim 113**) a body having a two dimensional array of fiber holes, each of the fiber holes, passing through the body, extending over a length, the length is greater than a minimum length sufficient to support optical fibers inserted into the fiber holes, and having a narrowest dimension about a size equal to and capable of accepting an optical fiber inserted through each hole, **for claim 117**, a rectangular array, **for claim 120**, cylindrical holes, **for claim**

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**123**, the narrowest dimension of a fiber hole is slightly larger than a cross sectional area of a single mode optical fiber, **for claim 125**, the body has a face and an inner surface, and the fiber holes pass through the body from the face to the inner surface, **for claim 126**, the face and the inner surface are substantially parallel to each other, **for claim 127**, the inner surface (140) is at an angle (90 degrees) relative to the face (115), **for claim 129**, the cross-sectional shape of a fiber hole at the face of the ferrule is a non-circular (see figure 19),

However, Sakai et al does not disclose:

- a) The length being approximately less than 3000 microns (**for claim 113**) or between about 1000/500/150 microns and the minimum thickness (**for claims 114-116**). Omiya et al discloses the length being less than 6 mm (6000 microns) which reads on less than 3000 microns or between about 1000/500/150 microns and the minimum thickness, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Sakai et al to have length less 3000 microns or between about 1000/500/150 microns and the minimum thickness in view of Omiya et al in order to manufacture economically.
- b) **In regard to claims 130-132**, the claimed method language is counter part of the apparatus claimed. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to develop a particular method for the disclosed apparatus of the cited references.

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7. Claims 118, 119 and 124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al (5,815,621, cited in IDS) in view of Omiya et al (6,158,900, cited in IDS) as applied to claim 113 above, and further in view of prior art figure 2.

Sakai et al in view of Omiya et al discloses all the limitations of claim 113, as shown above,

However, Sakai et al in view of Omiya et al does not disclose:

- a) multiple rows of at least 12/6 holes per row. Prior art figure 2 and specification page 2 discloses 2x12 array, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Sakai et al to have multiple rows of at least 12/6 holes per row in view of prior art figure 2 in order to have multiple circuits.
- b) the fiber holes are on a pitch about 250. Prior art figure 2 discloses the fiber holes are on a pitch about 250, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Sakai et al to have the fiber hole pitch to be 250 in view of prior art figure 2 to accommodate the fiber properly.

8. Claims 121, 122, 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al (5,815,621, cited in IDS) in view of Omiya et al (6,158,900, cited in IDS) as applied to claim 113 above, and further in view of JP 2002-162536.

Sakai et al in view of Omiya et al discloses all the limitations of claim 113, as shown above,

However, Sakai et al in view of Omiya et al does not disclose:

- a) The fiber holes are tapered along their entire/a part of length. JP 2002-162536 discloses the fiber holes are tapered along their entire/a part of

length (see figures 1-4), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Sakai et al to have the fiber holes tapered along their entire/a part of length in view of JP 2002-162536 for easy insertion purpose.

- b) the face surface is curved. JP 2002-162536 discloses the face surface is curved (see figure 3), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Sakai et al to have the face surface to be curved in view of JP 2002-162536 to have alignment adjustment.

#### ***Contact***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any correspondence to this action may be mailed to:**

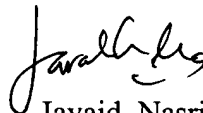
**Commissioner for Patents  
Post Office Box 1450  
Alexandria, VA 22313-1450**

For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office, 68 Fed. Reg. 14332 (March 25, 2003)*.

**Or faxed to:** 703-308-7722 or 308-7724 (informal or draft communications should be clearly labeled "PROPOSED" or "DRAFT")

**Hand-delivered responses should be brought to:**

**Crystal Plaza 4, Fourth Floor (receptionist)  
2201 South Clark Place, Arlington, Virginia**

  
Javaid Nasri  
Primary Examiner  
Art Unit 2839

JN  
jhn  
July 21, 2004

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